

## New Ways of Language Learning for Blind or Visually Impaired Children and Teenagers

**Antonio Quatraro, Mario Paiano**

E-mail: [aquatraro@alice.it](mailto:aquatraro@alice.it) [mario@centromachiavelli.it](mailto:mario@centromachiavelli.it)  
UICI, Centro Machiavelli (Italia)

### **Abstract**

*Learning a foreign language is important for everybody, particularly if your mother tongue is not very widespread, and given the demands for communication skills in modern society, including Internet.*

*Language learning is even more important for visually impaired people, in order to reduce the gap caused by lack of sight or from severe visual impairment.*

*Visual impairment affects every sphere of human life, both as an individual and as a member of a community. Visual impairment affects all domains of human activities, including communication, mobility, human relationships. This is still more true in our society, dominated by image and rapidity.*

*Mastering a foreign language, in particular English, thus becomes a sort of "bridge" through which the visually impaired person can have access to different cultures and to different opportunities in the domain of social contacts.*

*The word, in the case of the visually impaired person, has a much greater importance than by sighted people, because speech is the only communication modality for human relationships. Body language, movie, image communication have to be translated into spoken or written words, in order to be grasped also by the visually impaired.*

*At present only a small minority of visually impaired people are proficient in reading. This is due to the circumstance that the majority of them suffer from loss of sight when they are young, or adult, that is too late in order to master the Braille reading method, based on the sense of touch.*

*Learning a foreign language in the traditional way, that is combining spoken and written words, becomes very difficult or impossible, owing to the fact that the individual can no longer rely on his ability to manipulate written words (reading /writing).*

*The introduction of IT technology based on synthetic voice is a true breakthrough for the VI, in the domain of access to information and consequently IT has opened new perspectives for new job opportunities as well as for leisure (travelling, reading, e-commerce, etc.).*

*But learning a language implies complex mental activities, which require constant interaction between student and teacher. When the learning activity includes IT, interaction with the machine becomes much more difficult for the visually impaired, who are bound to a linear access to information [slide]*

*ELLVIS - English Language Learning programme for Visually Impaired Students employs a new technology, based on haptic and kinaesthetic man/machine interaction. It involves a variety of basic manual abilities and promotes fine coordination between hearing and hand, thus promoting a more efficient learning process. It is well known that assimilation is derived not only from passive listening, but rather from physical interaction between learner and teacher. ELLVIS, with its force feedback technology provides the best possible learning setting for those visually impaired people who are not proficient with tactile reading. Its outcomes will be of benefit for many didactical reasons as well as in rehabilitation contexts.*



*The ELLVIS consortium can also be considered a good example of integration between common schools and special centres. The Consortium consists of users' associations, special schools for the blind and common language schools. This characteristic seems very relevant in view of an inclusive methodology.*

## **1. Introduction**

The ELLVIS - English Language Learning programme for Visually Impaired Students is a project which is being carried out by Centro Machiavelli, a School founded in 1978 which provides linguistic and cultural tools to learn languages and creates opportunity for exchanges. Since 1988 Centro Machiavelli has been a member of TANDEM NETWORK, an International Association of Language Schools. In 2003 the Centre obtained recognition from the Ministry of Education. In 2005 it obtained quality certification ISO9001:2000. In 2008, it was accredited by the Tuscany Region as Training Centre for Lifelong Learning. Since 2007 it has been operating in training activities such as mobility and multilateral projects within the EU program LLP.

The project commenced in February 2009 in co-operation with UICI, Italian Union of Blind Firenze and a network of European partners from different Countries (DAA Berlin and TANDEM HAMBURG - Germany, Institut Montclair Angers - France, ANB and CCGBV - Romania) within the LLP - Sub-program COMENIUS Multilateral projects. The partnership is an integrated network that includes language schools and special centres which integrate their own specific knowledge and competencies with the aim of facilitating language learning by the blind and the visually impaired.

The overall objective of the ELLVIS project is to amplify and to test a method developed in a previous EU project (AllVip) designed for language learning for blind and visually impaired students with the use of a joystick based on force-feedback and related interfaces.

Project duration: from 1st of October 2009 to 31st of March 2011.

Centro Machiavelli is the coordinator of the ELLVIS project and leads and manages the activities. It co-ordinates the local and transnational meetings, provides sufficient information for every partner and leads the work flow in the different work packages.

Centro Machiavelli is also responsible for the obtaining of short and long term objectives, for the results and their dissemination in Europe.

Furthermore, Centro Machiavelli is responsible for the English course for blind Italian-speaking students which includes the translating and adapting of the course as well as the recording and editing of the audio material.

## **1.2 Innovation, Aims, Activities**

In detail, the ELLVIS project intends to improve the access of visually impaired people to language learning. As good learning material for visually impaired children is rare it is essential to create innovative material which opens up new possibilities for this target group and makes it possible for visually impaired children to take part in lifelong learning.

### **Innovation**

Learners, blind and visually impaired children, as well as their trainers, face the situation of having to adapt existing materials (produced for sighted people) or make use of technical aids such as Braille readers, screen readers or purely audio-based materials. Learning tools based on iconic material (images, pictures, animations) are practically unavailable for VI persons. At present there is no alternative solution to the "book and tape" methodology. This language course is aimed at those who



are unable to use these technical aids, who need further assistance and prompting through a system that supplies feedback in other than audio-file form, namely by the 'force-feedback' reaction that the joystick offers.

### **Aims**

The ELLVIS project intends to amplify the innovative results of the former project AllVip, which has developed an alternative user interface for language learning without a screen reader, using force-feedback devices (joysticks). The playful attitude of this technical device adds to the motivational value of the program.

The ELLVIS project aims to adapt and broaden the English course for young blind learners of other mother tongues to the needs and interests of children and teenagers. There are four language institutions and three schools for the blind working together to achieve these targets: one English course each for blind Italian-speaking students, French-speaking students, and Romanian-speaking students.

### **Activities**

The language schools are in charge of didactical contents concerning language learning.

The schools for blind and visually impaired students are responsible for accessibility and user friendliness of learning tools, as well as offering teachers and trainers appropriate strategies in order to integrate visually impaired students in their class.

- Introduction and training for the ALLVIP course and results
- Translation, creation and recording of the English course materials for the target languages French, Italian, Romanian
- Compilation of the Language Learning Software
- Testing of the Language Learning Software by the involved blind and VIP schools
- Fine-Tuning of the Language Learning Software and language materials
- Final Version of the English course (software and materials package) for French, Italian and Romanian blind and visually impaired pupils
- Final Edition on DVD with the Teacher's Manual as Guidelines for the course
- Dissemination, Valorization and Exploitation of the project's products and results

### **1.3 Planned objectives**

Language learning is not only a European competence, it is also a path to education, a path out of isolation towards communication, emancipation and mobility. In a globalised Internet world, the knowledge of English specifically is imperative and provides new personal and vocational opportunities not only for young blind learners.

However, there are still very few adequate language learning materials available for visually impaired people.

As stated above, the former project "AllVip" developed an alternative user interface for language learning that works without a screen reader and is truly interactive, using force-feedback devices.

The Comenius project "ELLVIS" wants to adapt the English course of the first project for young blind learners of other mother tongues. Four language institutions and three schools for the blind are working together to achieve these targets: one English course each for blind French-speaking children, Italian-speaking children and Romanian-speaking children.

The self-learning course therefore have been amplified not only adapting it for the different mother tongues, but also for the needs and interests of children and teenagers.



The audio-courses consist of English dialogues and texts, French/Italian/Romanian translations, explanations, and instructions. It also has virtual rooms, in which the learners can discover speaking objects.

#### **1.4 Performed activities**

Since the beginning of the project all members of the Consortium have been involved in integrating their competencies, their experiences and their communication style, in order to achieve best possible results. One of the goals of the project is to put normal language teachers in the position of being capable of integrating a visually impaired student into their course. This first activity consisted of brain storming about possible common activities; full immersion activities, including blindfolding, live interaction with a person with visual impairment, dinner in the dark, all aimed at providing first hand experiencing of the condition of blindness.

At present the consortium is involved in preparing a training program, including learning material, targeted to language teachers, who are interested in enrolling visually impaired students in their class.